Remarks

Rejection 35 USC 103

Claims 17 and 18 were rejected as obvious over the Prior Art together with Huang.

Huang appears to be using the term "latch-up" incorrectly to mean triggering. As discussed in the present application on page 5, second last paragraph, latch-up is related to the holding voltage of a triggering device such as an SCR or LVTSCR. The triggering device goes into conduction when a triggering voltage is reached causing breakdown of the device. This is typically caused by an ESD event that supplies the triggering voltage. Once the ESD event passes, the characteristic S-shaped current-voltage curve of the triggering device prevents the device from turning off unless the voltage across the device is reduced to a sufficiently low voltage known as the holding voltage. If the voltage is not taken down to below the holding voltage, the device is said to latch-up and remain in conduction. Thus latch-up is related to the continued on state of the device after an ESD event has passed if the voltage is not taken to below the holding voltage. Thus it is beneficial to have a high holding voltage to avoid such latch-up.

In contrast, Huang speaks of trying to achieve latch-up only when ESD occurs, and minimizing latch-up caused by non-ESD events (see column 1, lines 65-67, and column 2, lines 5-6, respectively). This makes no sense since latch-up is an unwanted condition that takes place after triggering (typically due to an ESD event) if the voltage across the device remains above the holding voltage. Thus latch-up is certainly not a condition that one is trying to achieve. Also minimizing latch-up by non-ESD events makes no sense since the device first has to trigger before there can be a latch-up condition. Thus it appears that Huang mistakenly uses the term latch-up to mean triggering. In other words Huang is trying to avoid triggering in the absence of an ESD event.

Thus, it is respectfully submitted that Huang does not teach holding voltage adjustment.

However, in order to achieve early allowance, applicant is willing to cancel claims 17 and 18.

Applicant therefore cancels all claims except claims 4-6. Please note that for reasons of form, Claim 4 has been amended since it is a method claim making use of a device with a certain structure.

Early allowance of claims 4-6 is therefore requested.

Formal drawings are attached hereto.

Respectfully Submitted,

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